



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Jes THYSSEN et al.

Appl. No. 10/084,503

Filed: February 28, 2002

For: **Efficient Excitation Quantization
In A Noise Feedback Coding
System Using Correlation
Techniques**

Confirmation No. 7474

Art Unit: 2644

Examiner: To Be Assigned

Atty. Docket: 1875.1760001

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Information Disclosure Statement

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not

be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR **before the mailing date of a first Office Action on the merits** OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
 - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was

first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ c. Attached is our PTO-2038 Credit Card Payment Form [OR] Check No. _____ in the amount of \$ _____ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Attached is our PTO-2038 Credit Card Payment Form [OR] Check No. _____ in the amount of \$ _____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
 - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
 - ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more

than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below:
- ☐ 7. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Robert Sokohl
Attorney for Applicants
Registration No. 36,013

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FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
1875.1760001APPLICATION NO.
10/084,503APPLICANT
Jes THYSSEN et al.FILING DATE
February 28, 2002GROUP
2644

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA1	2,927,962	03/1960	C.C. Cutler			
	AB1	4,220,819	09/1980	Atal			
	AC1	4,317,208	02/1982	Araseki et al.			
	AD1	4,776,015	10/1988	Takeda et al.			
	AE1	4,791,654	12/1988	De Marca et al.			
	AF1	4,811,396	03/1989	Yatsuzuka			
	AG1	4,860,355	08/1989	Copperi			
	AH1	4,896,361	01/1990	Gerson			
	AI1	4,918,729	04/1990	Kudoh			
	AJ1	4,963,034	10/1990	Cuperman et al.			
	AK1	4,969,192	11/1990	Chen et al.			

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FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL1	0 573 216 A2	12/8/93	Europe			Yes No
	AM1						Yes No
	AN1						Yes No
	AO1						Yes No
	AP1						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	1	
	AS	1	
	AT	1	E.G. Kimme and F.F. Kuo, "Synthesis of Optimal Filters for a Feedback Quantization System", IEEE Transactions on Circuit Theory, The Institute of Electrical and Electronics Engineers, Inc., Vol. CT-10, No. 3, September 1963, pp. 405-413.

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



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	AA2	5,007,092	04/1991	Galand <i>et al.</i>			
	AB2	5,060,269	10/1991	Zinser			
	AC2	5,204,677	04/1993	Akagiri <i>et al.</i>			
	AD2	5,313,554	05/1994	Ketchum			
	AE2	5,487,086	01/1996	Bhaskar			
	AF2	5,493,296	02/1996	Sugihara			
	AG2	6,014,618	01/2000	Patel <i>et al.</i>			
	AH2	6,055,496	04/2000	Heidari <i>et al.</i>			
	AI2	6,131,083	10/2000	Miseki <i>et al.</i>			
	AJ2	5,963,898	10/1999	Navarro <i>et al.</i>			
	AK2	4,393,272	07/1983	Itakura <i>et al.</i>			

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL2						Yes No
	AM2						Yes No
	AN2						Yes No
	AO2						Yes No
	AP2						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	2	Ira A. Gerson and Mark A. Jasiuk, "Techniques for Improving the Performance of CELP-Type Speech Coders," IEEE Journal on Selected Areas in Communications, IEEE, Vol. 10, No. 5, June 1992, pp. 858-865.
	AS	2	Cheng-Chieh Lee, "An Enhanced ADPCM Coder for Voice Over Packet Networks," International Journal of Speech Technology, Kluwer Academic Publishers, 1999, pp.343-357.
	AT	2	Marcellin, M.W. <i>et al.</i> , "Predictive Trellis Coded Quantization of Speech," IEEE Transactions on Acoustics, Speech, And Signal Processing, Vol. 38, No. 1, IEEE, pp. 46-55 (January 1990).

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA3	6,188,980 B1	02/2001	Thyssen			
	AB3	2003/0083865	05/01/2003	Thyssen			
	AC3	2003/0078773	04/24/2003	Thyssen			
	AD3	2003/0135367	07/17/2003	Thyssen et al.			
	AE3	2003/0135365	07/17/2003	Thyssen et al.			
	AF3						
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	AK3						

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	AL3						Yes No
	AM3						Yes No
	AN3						Yes No
	AO3						Yes No
	AP3						Yes No

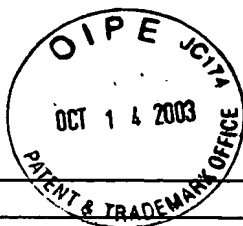
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	3	Hayashi, S. et al., "Low Bit-Rate CELP Speech Coder with Low Delay," <i>Signal Processing</i> , Elsevier Science B.V., Vol. 72, 1999, pp. 97-105.
	AS	3	Tokuda, K. et al., "Speech Coding Based on Adaptive Mel-Cepstral Analysis," <i>IEEE</i> , 1994, pp. I-197-I-200.
	AT	3	Marcellin, M.W. and Fischer, T.R., "A Trellis-Search 16 KBIT/SEC Speech Coder with Low-Delay," <i>Proceedings of the Workshop on Speech Coding for Telecommunications</i> , Kluwer Publishers, 1989, pp. 47-56.

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	AA4						
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	AL4						Yes No
	AM4						Yes No
	AN4						Yes No
	AO4						Yes No
	AP4						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	4	Watts, L. and Cuperman, V., "A Vector ADPCM Analysis-By-Synthesis Configuration for 16 kbit/s Speech Coding," <i>Proceedings of the Global Telecommunications Conference and Exhibition (Globecom)</i> , IEEE, 1988, pp. 275-279.
	AS	4	Itakura, F., "Line Spectrum representation of linear predictor coefficients of speech signals", <i>The Journal of the Acoustical Society of America</i> , American Institute of Physics for the Acoustical Society of America, Spring 1975, Vol. 57, Supplement No. 1, p. S35.
	AT	4	Kabal, P. and Ramachandran, R.P., "The Computation of Line Spectral Frequencies Using Chebyshev Polynomials", <i>IEEE Transactions on Acoustics, Speech, and Signal Processing</i> , IEEE, December 1986, Vol. ASSP-34, No. 6, pp. 1419-1426.

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	AA5						
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	AG5						
	AH5						
	AI5						
	AJ5						
	AK5						

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	AL5						Yes No
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	AN5						Yes No
	AO5						Yes No
	AP5						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>5</u>	Rabiner, L.R. and Schafer, R.W., "Digital Processing of Speech Signals", Prentice Hall, 1978, pp. 401-403 and 411-413.
	AS	<u>5</u>	
	AT	<u>5</u>	

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